



Indian Standard

(Reaffirmed 2013)

SPECIFICATION FOR RETRACTOR, MASTOID, SELF-RETAINING (MOLLISON'S PATTERN)

Surgical Instruments Sectional Committee, CPDC 11; Precision Type Surgical Instruments Subcommittee, CPOC 11:5 | Ref : Doc : CPDC 11(474) |

1. **Scope** — Dimensional and other requirements for self-retaining mastoid retractor (Mollison's pattern) used in ENT surgery.

2. **Shape and Dimensions** — As shown in Fig. 1.

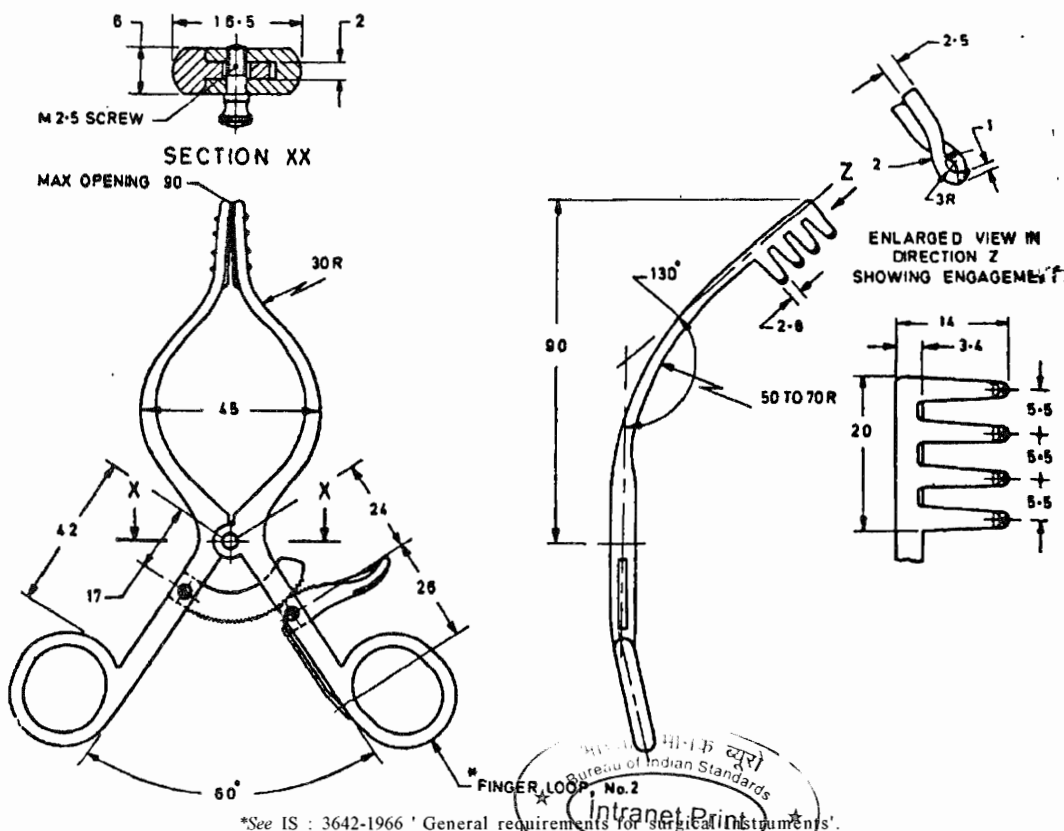


FIG. 1 RETRACTOR, MASTOID, SELF-RETAINING (MOLLISON'S PATTERN)

3. Materials

Component	Material	Conforming to
Arms	Stainless steel	Designation 22Cr13 or 30Cr13 of Schedule V of IS: 1570-1961 'Schedules for wrought steels for general engineering purposes'
Ratchet arrangement and pivot screw	Stainless steel	Designation 22Cr13, 30Cr13 or 20Cr18Ni2 of Schedule V of IS: 1570-1961
Spring	Stainless steel	Designation 30Cr13 of Schedule V of IS: 1570-1961

4. Workmanship and Finish

4.1 All the surfaces, except the ratchet teeth, shall be smooth and free from pits, and the edges shall be even.

Adopted 7 July 1970

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Gr 1

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MAX. RETAIL PRICE
INCL. OF ALL TAXES
₹90

AMENDMENT NO. 1 JANUARY 1979
TO
IS : 5720-1970 SPECIFICATION FOR RETRACTOR, MASTOID,
SELF-RETAINING (MOLLISON'S PATTERN)

Alteration

(*Page 2, clause 6.3*) — Substitute the following for the existing clause:

"6.3 Corrosion Resistance — The instrument shall satisfy the boiling and autoclaving test as specified in IS : 7531-1975 ' Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments '."

(CPDC 26)

Printed at Neelkamal Printers, Delhi, India

IS : 5720 - 1970

- 4.2 The edges of the retracting prongs shall taper to a blunt point.
- 4.3 The retractor arms shall open and close smoothly without any friction or undue resistance or play at the joint.
- 4.4 The ratchet teeth shall be well cut, clean, uniform, regular and evenly spaced.
- 4.5 The ratchet teeth shall engage accurately and securely and shall effectively lock the retractor at any desired position.
- 4.6 The ratchet arm with the finger rest pressed shall swivel freely. The spring shall not be too stiff.
- 4.7 The retractor shall be passivated and finished dull.

5. Heat Treatment — The retractor, except the springs, shall be hardened and tempered to a hardness of 380 to 400 *HV*. The spring shall be hardened and tempered to a hardness of 400 to 460 *HV*.

6. Tests

6.1 Open the arms of the retractor to about 75 mm measured at the tip. Grip the retractor at the retracting blades between the thumb and the forefinger and apply force trying to close the blades. The ratchet shall not slip under the force and shall show no sign of damage on removal of the force. Repeat the test with 3 different arm openings.

6.2 Open the arms as above. Apply a force of 70N (7 kgf approximately) between each opposite pair of retracting prongs tending to close the retractor. Apply the force gradually and maintain for 2 minutes. On completion of the test the retractor shall show no sign of damage.

6.3 *Corrosion Resistance* — Scrub the retractor with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the retractor. Immerse in copper sulphate solution at room temperature for 6 minutes and wash off with fresh water or wet cotton wool. The solution shall be made up as follows:

Copper sulphate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$)	4.0 g
Sulphuric acid (H_2SO_4) (sp gr 1.84)	10.0 g
Water (H_2O)	90.0 ml

No red stains or spots on the retractor shall be allowed but dulling of the polished surface may be permitted.

7. Marking — Each retractor shall be marked with the following;

- Manufacturer's name, initials or recognized trade-mark; and
- The words 'stainless steel'.

7.1 *ISI Certification Marking* — Details available from the Indian Standards institution, New Delhi.

8. Packing — Each retractor shall be wrapped in moisture-proof paper or put in a polyethylene bag. Each such retractor shall be packed in an individual cardboard carton. The packing may also be done as agreed to between the purchaser and the supplier.